

In the Claims:**Claim 1 (currently amended):**

- 1 1. A device, comprising:
2 an assembled structure of a plurality of intimately adjoined carbonized carbon tubes, said
3 assembled structure is prepared according to a process including the steps of:
4 coating a plurality of fibers with a carbonizable carbon-containing material to form a coating
5 layer on each of said plurality of fibers;
6 assembling said plurality of coated fibers to form an assembled matrix;
7 binding said assembled matrix with one or more binding agents;
8 removing said plurality of fibers; and
9 carbonizing said coating layer and the residue of said fibers to form said assembled structure
10 of the plurality of intimately adjoined carbonized carbon tubes which share a common wall.

Claim 2 (original):

- 1 2. The device according to claim 1, wherein said fibers are selected from the group consisting
2 of monofilaments, yarns, woven cloths, non-woven fabrics, and a combination thereof.

Claim 3 (original):

- 1 3. The device according to claim 1, wherein the binding step utilizes a chemical material as the
2 binding agent, selected from the group consisting of polymer, oligomer, resin, adhesive, sol gel,
3 metal oxide, metal, ceramic, cement, epoxy resin, and a combination thereof.

Claim 4 (original):

- 1 4. The device according to claim 3, wherein the chemical material is thermally more stable than
2 the coating material.

Claim 5 (original):

- 1 5. The device according to claim 3, wherein the chemical material is thermally less stable than

- 2 the coating material.

Claim 6 (original):

- 1 6. The device according to claim 1, wherein said binding agent is a chemical reagent that is able
2 to chemically or physically interact with the surfaces of said coating layers and result in interfacial
3 bonding structures among said carbon tubes.

Claim 7 (original):

- 1 7. The device according to claim 1, wherein said binding agent is a chemical reagent that is able
2 to physically wet or swell said coated fibers totally or in part and render said coated fibers sticking
3 to or interpenetrating into each other at the contacted surfaces.

Claim 8 (original):

- 1 8. The device according to claim 1, wherein the binding step utilizes a crosslinking reagent as
2 the binding agent, selected from the group consisting of peroxide, hydroperoxide, azo compound,
3 redox initiator, photoinitiator, sulfur, and a combination thereof.

Claim 9 (original):

- 1 9. The device according to claim 1, wherein the binding step utilizes a binding agent that is
2 carbonizable.

Claim 10 (original):

- 1 10. The device according to claim 1, wherein the binding step utilizes an energy beam as the
2 binding agent, selected from the group consisting of lasers, ultraviolet light, visible light, high energy
3 radiations, g-ray, x-ray, electrons, high-speed particles, photons, and a combination thereof.

Claim 11 (original):

- 1 11. The device according to claim 1, wherein the binding step utilizes a reactive atmosphere as
2 the binding agent, selected from the group consisting of plasma, hot air, ozone, and a combination

3 thereof.

Claim 12 (original):

1 12. The device according to claim 1, wherein the binding step utilizes an energy flux as the
2 binding agent, selected from the group consisting of microwave, infrared radiation, heat, and the
3 combination thereof.

Claim 13 (original):

1 13. The device according to claim 1, wherein the binding step is further repeated utilizing the
2 same or different types of binding agents.

Claim 14 (original):

1 14. The device according to claim 1, wherein the assembling step utilizes an assembling method
2 selected from the group consisting of packing, weaving, knitting, netting, threading, sewing,
3 stitching, stringing, wiring, tying, braiding, wrapping, binding, fastening, winding, stapling, and a
4 combination thereof.

Claim 15 (previously presented):

1 15. The device according to claim 1, which has a honeycomb-like structure.

Claim 16 (currently amended):

1 16. A device of an assembled structure, comprising:
2 a plurality of intimately adjoined carbonized carbon tubes wherein said plurality of
3 carbonized carbon tubes include:
4 carbonized coating material; and
5 carbonized fiber residue; and
6 a binding element which binds the plurality of intimately adjoined carbonized carbon tubes,
7 which share a common wall.

Claim 17 (original):

- 1 17. The device according to claim 16, wherein the binding element is a carbonized binding agent.

Claim 18 (original):

- 1 18. The device according to claim 16, wherein the binding element is interfacial covalent
2 bonding structures at the contacted surfaces between said carbon tubes.

Claim 19 (original):

- 1 19. The device according to claim 16, wherein the binding element is interfacial covalent bonds
2 at the contacted surfaces between said carbon tubes.

Claim 20 (original):

- 1 20. The device according to claim 16, wherein the binding element is inorganic network
2 structures, which hold or bind said assembled structure of carbon tubes.

Claim 21 (original):

- 1 21. The device according to claim 16, wherein the binding element is a fused and interpenetrated
2 interfacial structure of said carbonized coating material.

Claim 22 (previously presented):

- 1 22. The device according to claim 16, which has a honeycomb-like structure.

Claim 23 (original):

- 1 23. The device according to claim 16, wherein said assembled structure of carbon tubes is a plate
2 or mesh.

Claim 24 (withdrawn):

- 1 24. A method for making an assembled structure of carbon tubes, comprising the steps of:
2 coating a plurality of fibers with a coating material to form a coating layer over the fibers;

- 3 assembling the coated fibers into an assembled matrix;
- 4 binding the assembled matrix with one or more types of binding agents;
- 5 removing the fibers; and
- 6 carbonizing the coating layers and residue of the fibers to form said assembled structure of carbon
- 7 tubes.

Claim 25 (withdrawn):

- 1 25. The method according to claim 24, wherein said fibers are selected from the group consisting
- 2 of monofilaments, yarns, woven cloths, non-woven fabrics, and a combination thereof.

Claim 26 (withdrawn):

- 1 26. The method according to claim 24, wherein the binding step utilizes a chemical material as
- 2 the binding agent, selected from the group consisting of polymer, oligomer, resin, adhesive, sol gel,
- 3 metal oxide, metal, ceramic, cement, epoxy resin, and a combination thereof.

Claim 27 (withdrawn):

- 1 27. The method according to claim 26, wherein the chemical material is thermally more stable
- 2 than the coating material.

Claim 28 (withdrawn):

- 1 28. The method according to claim 26, wherein the chemical material is thermally less stable
- 2 than the coating material.

Claim 29 (withdrawn):

- 1 29. The method according to claim 24, wherein said binding agent is a chemical reagent that is
- 2 able to chemically or physically interact with the surfaces of said coating layers and result in
- 3 interfacial bonding structures among said carbon tubes.

Claim 30 (withdrawn):

- 1 30. The method according to claim 24, wherein said binding agent is a chemical reagent that is
2 able to physically wet or swell said coated fibers totally or in part and render said coated fibers
3 sticking to or interpenetrating into each other at the contacted surfaces.

Claim 31 (withdrawn):

- 1 31. The method according to claim 24, wherein the binding step utilizes a crosslinking reagent
2 as the binding agent, selected from the group consisting of peroxide, hydroperoxide, azo compound,
3 redox initiator, photoinitiator, sulfur, and a combination thereof.

Claim 32 (withdrawn):

- 1 32. The method according to claim 24, wherein said binding agent is carbonizable.

Claim 33 (withdrawn):

- 1 33. The method according to claim 24, wherein the binding step utilizes an energy beam as the
2 binding agent, selected from the group consisting of lasers, ultraviolet light, visible light, high energy
3 radiations, g-ray, x-ray, electrons, high-speed particles, photons, and a combination thereof.

Claim 34 (withdrawn):

- 1 34. The method according to claim 24, wherein the binding step utilizes a reactive atmosphere
2 as the binding agent, selected from the group consisting of plasma, hot air, ozone, and a combination
3 thereof.

Claim 35 (withdrawn):

- 1 35. The method according to claim 24, wherein the binding step utilizes an energy flux as the
2 binding agent, selected from the group consisting of microwave, infrared radiation, heat, and a
3 combination thereof.

Claim 36 (withdrawn):

- 1 36. The method according to claim 24, wherein the binding step is further repeated utilizing the

2 same or different types of binding agents.

Claim 37 (withdrawn):

1 37. The method according to claim 24, wherein the assembling step utilizes an assembling
2 method selected from the group consisting of packing, weaving, knitting, netting, threading, sewing,
3 stitching, stringing, wiring, tying, braiding, wrapping, binding, fastening, winding, stapling, and a
4 combination thereof.

Claim 38 (withdrawn):

1 38. The method according to claim 24, wherein the removing step and the carbonizing step are
2 performed concurrently.